The Impact of Depression on Cardiovascular Disease

Mary Elizabeth Hotchkiss, Juliana Perez-Soto; Dr. Tyra Dark; Florida State University
College of Medicine

Abstract

- Having depressive symptomology can greatly affect management of cardiovascular diseases and thereby increase the likelihood of adverse outcomes.
- The purpose of this research is to examine the relationship between depressive symptomology and its impact, if any, on participants with pre-existing cardiovascular disease.
- Data for this study comes from the 2017-March 2020 National Health and Nutrition Examination Survey (NHANES).
- Analyses were conducted to determine possible associations between the comorbidities.
- These results have the potential to positively inform health care for individuals who experience these comorbid conditions.

Introduction

- The aim of this research is to better understand the relationship between depression and cardiovascular disease, specifically coronary heart disease, congestive heart failure, and heart attacks. Current research suggests there to be a strong association between mood disorders, such as anxiety and depression, and cardiovascular diseases.
- There seems to be a strong positive association between anxiety diagnosed at a young age and subsequent coronary heart disease later in life (Janzsky et al., 2010).
- There is also evidence that individuals experiencing comorbid depressive disorders and anxiety disorders have a strong positive association with coronary heart disease (Kemp et al., 2015).
- Research has also been done on these relationships with an attention to socio demographic characteristics, and have found there to be a strong association between employment status and depression, but not factors such as race, ethnicity, or healthcare coverage (Fan et al., 2015).
- For this research, it is expected to find a association between mood disorders and cardiovascular disease.

Methods

Dataset

- Data from the national data set NHANES (National Health and Nutrition Examination Survey) from 2017-March 2020 was utilized for this project.
- NHANES was designed to assess the health and nutritional status of adults and children in the United States.
- This survey combines questionnaires and physical examinations. NHANES has been conducting interviews since the early 1960s.
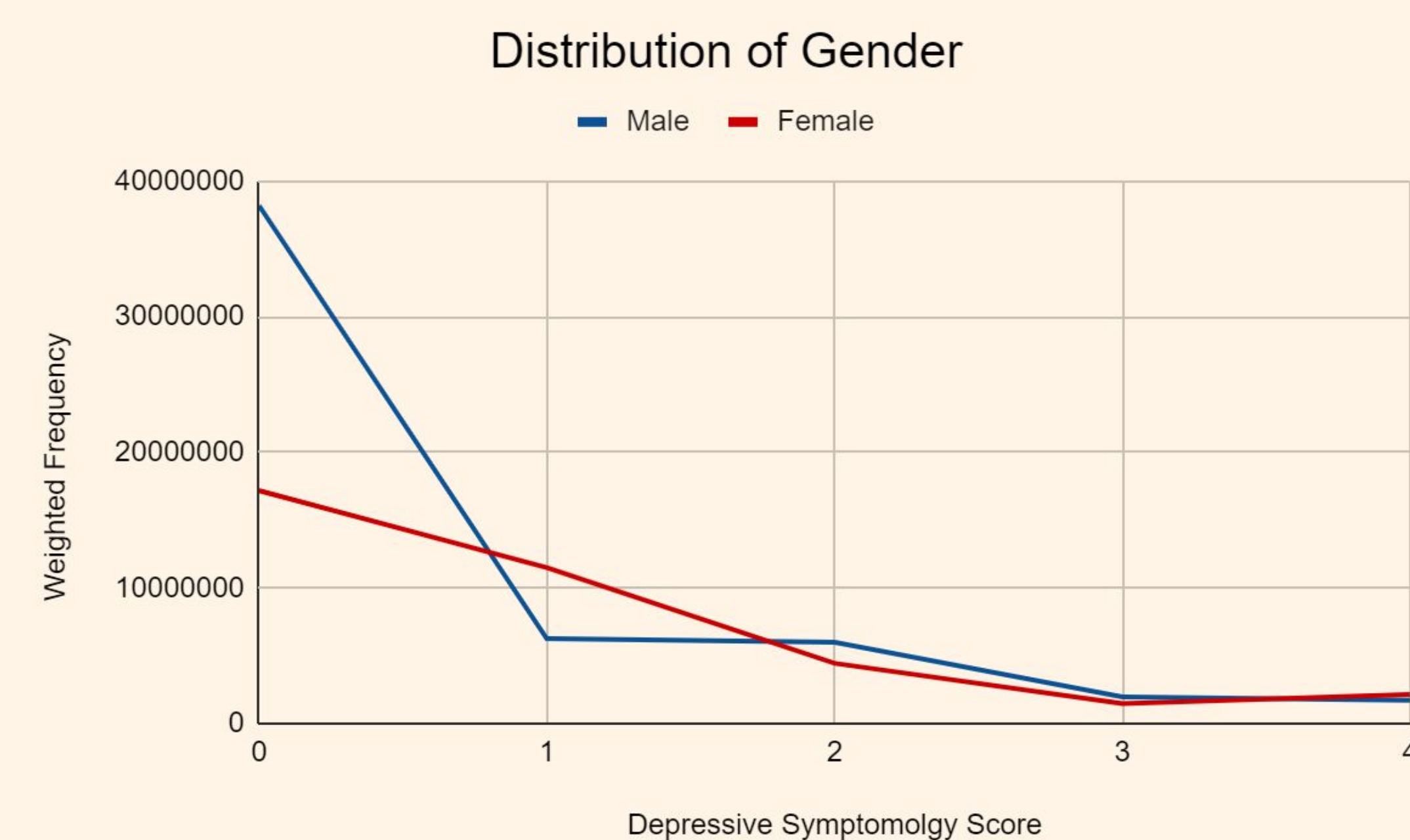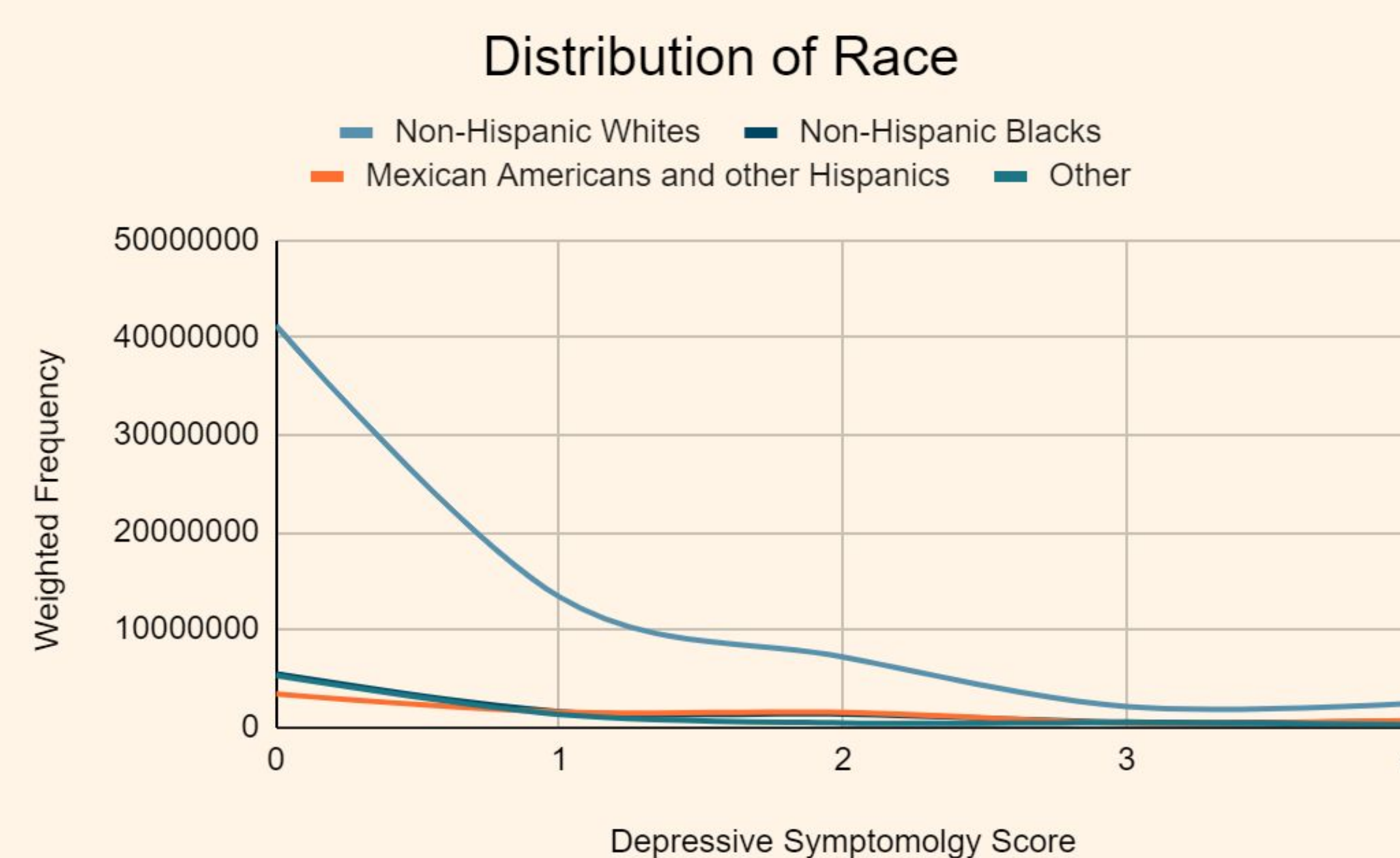
Statistical Analysis

- SAS software was utilized to perform the statistical analysis.
- We used this program to run Chi-square tests, to examine the relationship between depressive symptomology and cardiovascular disease.

Results

Chi-Square Analysis:

- The results demonstrated there to be a significant association/relationship between depressive symptomology and cardiovascular disease.

Distribution of Race

Distribution of Gender

References

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Conclusion

- Based on the fact that the P values for all of the relationships are less than 0.001, we can conclude that there is an association between depression and cardiovascular disease.
- The P values were less than 0.001 in all of the populations we analyzed: Non-Hispanic whites, Non-Hispanic Blacks, Mexican Americans and other Hispanics, Other Races, Males, and Females.
- We can conclude that there is an association between depressive symptomatology and cardiovascular disease for all of these populations.

Discussion

- Our results did suggest that there was an association between depressive symptomolgy and cardiovascular disease, specifically coronary heart disease, congestive heart failure, and/or heart attacks.
- It is important to note that the study was limited given that data consisted of self-reported data measures, and because the data did not control for extraneous variables.

Acknowledgments